

The World's Water Crisis

By Brian Howard

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At the recent G8 summit in Evian, France, delegates met to discuss, among other issues, how to provide safe drinking water to the 1.5 billion of the world's citizens who live without it. Everyone within the summit gates enjoyed the free and plentiful bottled mineral water. "It's obscene," says one journalist who attended the conference, held near the source of one of the world's most famous bottled water brands. "How can they not see that holding the summit in this place and talking about water in Africa is tasteless. It's beyond comprehension."

In fact, although many people might agree philosophically with Mikhail Gorbachev when he said, "Clean water is a universal human right," the world is sharply divided in terms of access to safe hydration. Those who can afford it are guzzling ever-increasing numbers of designer water bottles, while half the world's population lacks basic sanitation facilities, according to the United Nations (UN). Diseases caused by unsanitary water kill five to 12 million people a year, most of them women and children. A child dies every eight seconds from a preventable water-borne disease.

Only one-hundredth of one percent of the blue planet's water is readily accessible for human use. The World Resources Institute (WRI) estimates that 2.3 billion people currently live in "water-stressed areas." Hydrologists cite much of Africa, northern China, pockets of India, Mexico, the Middle East and parts of western North America as regions facing severe water shortages.

Some of the world's largest cities, including Mexico City, Bangkok and Jakarta, have severely over-pumped their groundwater aquifers. As world population continues to increase, water scarcity will affect two out of every

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three people by 2025, according to UN estimates. In the 20th century, demand for fresh water grew twice as fast as population. This imbalance is largely due to industrial agriculture, but is also a product of unequal development in standards of living versus sound water management.

Additionally, scientists at Harvard University point out that global warming could significantly harm water availability. A warmer atmosphere could lead to higher rates of evaporation, causing droughts and more severe weather. Faster runoff rates and slower infiltration of groundwater could follow. Warmer water may also promote detrimental algal and microbial blooms, which may lead to more water-borne illnesses. And ironically, as the climate heats up, people will want to use more water for drinking, bathing and watering plants.

“The next world war will be over water,” says Vice President Ismail Serageldin of the World Bank. Even now, some competition is beginning to build between (and within) nations over finite water resources. Egypt has watched warily as Ethiopia has built hundreds of dams on the Nile. Syria and Iraq have squabbled over water projects with Turkey, and some of Israel's many conflicts with Jordan and the Palestinians have been over water issues. Botswana raised a public outcry after Namibia announced emergency drought plans to divert water from the Okavango River.

Certain regions of the United States, including the Colorado and Rio Grande River Basins, also suffer ominous shortages. Much of the West's integral agriculture, livestock and recreation industries have been seriously threatened by water scarcity, and the region has endured catastrophic wildfire seasons. At the same time, sprawling development is threatening critical watershed areas throughout the world. Elizabeth Ainsley Campbell, executive director of the Nashua River Watershed Association, warns, “Unless we become more proactive in planning for growth and setting aside open space, our drinking water will be increasingly vulnerable to pollution from fertilizers, insecticides, fuel byproducts and other chemicals associated with commercial and residential development.”

Groundwater is similarly under siege. Over-pumping and rising sea levels have resulted in falling, and saltwater-invaded, water tables. Initial remediation of the 300,000 contaminated groundwater sites in the U.S. will cost up to \$1 trillion over the next 30 years, according to the National Research Council.

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Water scarcity is also a serious threat to natural ecosystems. “Water sheds with the highest biological value, as measured by the number of endemic bird and fish species, are also generally the most degraded,” says Carmen Revenga of the WRI. “Many biologically rich watersheds—particularly in Southeast Asia and China—also have high population densities, high levels of modified and irrigated land, and high rates of deforestation, especially in tropical areas,” she says. In the U.S., 37 percent of freshwater fish are at risk of extinction, 51 percent of crayfish and 40 percent of amphibians are imperiled or vulnerable, and 67 percent of freshwater mussels are extinct or vulnerable to extinction.

Fleeing the Third World

In much of the Third World, municipal water systems often serve only cities or primarily upper- and middle-class residents (who typically pay very low fees for use), while recurrent revenue problems inhibit increases or upgrades in service. As a result, as Christian Aid journalist Andrew Pendleton puts it, “The only water that is available to many poor people free of charge lies in festering pools and contains killer diseases such as cholera.” Pendleton continues, “If poor parents want to ensure their children will not die as a result of diarrhea, they must pay through the nose for water from private vendors or tankers.”

Some people in developing countries are increasingly turning to bottled water to meet their daily needs, a red flag for some critics. World consumption of bottled water is growing at seven percent a year, with the largest increases in the Asia Pacific region. *U.S. News & World Report* recently concluded, “The drive toward bottled water and filters will, however, widen the gap between the haves and have-nots.” For one thing, as Pendleton points out, poor people in need may be charged more per gallon of clean water than those in developed nations. Many families in Ghana spend 10 to 20 percent of their income on water.

Also, since many countries lack the infrastructure to recycle used water bottles, the containers end up further polluting the local water sources. In Nepal, for example, water bottles tossed aside by trekkers have caused a serious litter problem, since the government can't afford to cart them out of remote areas.

Many activists have also protested aggressive bottling operations in the developing world. In Brazil, Nestle offers Latin Americans a brand of bottled water called Nestle Pure Life. But as Paul Constance of the Inter-American Development Bank points out, “Though it looks much like the bottled mineral water long offered in restaurants and upscale supermarkets, Pure Life is different. It is drawn from local water sources, has an aggressively low price, and is

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marketed specifically ‘to meet the needs of people who have daily difficulty in access to quality water.’” One Pure Life bottling plant was established on a popular and ecologically sensitive mineral spring, prompting fierce opposition.

In Haiti’s capital, Port-au-Prince, only 10 percent of homes have tap water, even though the local groundwater reserves are thought to host enough capacity for every resident. The public water system struggles from serious disrepair and a chronic lack of funding. Recently, some entrepreneurs began drawing water from a network of private wells and trucking it to tank owners, who then sell the precious liquid to families at a huge profit. Constance says it is not uncommon for “legal or illegal private providers to make handsome profits by trucking or carting water into the poorest neighborhoods.” Many people have to carry water bottles great distances.

Clearly, the world is approaching a water crisis. Watersheds and municipal systems must be secured from rising threats. And some wonder if bottled water quenches human greed far better than human thirst.

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